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61

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,282	04/19/2001	Kenneth A. Puzey	PUZ-P003	9628
21833	7590	03/12/2003	EXAMINER RAHLL, JERRY T	
BOULDER PATENT SERVICE INC 1021 GAPTER ROAD BOULDER, CO 803032924			ART UNIT 2874	PAPER NUMBER
DATE MAILED: 03/12/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/837,282	PUZEY, KENNETH A.
	Examiner Jerry T Rahill	Art Unit 2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is FINAL.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-32 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-32 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 19 April 2001 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ .	6) <input type="checkbox"/> Other: ____ .

## **DETAILED ACTION**

### ***Drawings***

1. The drawings submitted have been reviewed and determined to facilitate understanding of the invention. The drawings are accepted as submitted.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 6-11, 15-18, 22-27 and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,856,881 to Otsuka et al.

4. Otsuka et al. describes an optical fiber having a core for guiding light of a specified range of wavelengths with each wavelength in the range traveling through the core at a particular group velocity and the light potentially producing four-wave mixing, a cladding formed around the core for containing light within the core, a predetermined amount of at least one dopant uniformly dispersed throughout the core such that no two wavelengths in the specified range of wavelengths travel through the core at the same, particular group velocity, thereby causing the four-wave mixing to be suppressed and cladding including an amount of B<sub>2</sub>O<sub>3</sub> cladding dopant uniformly dispersed throughout the cladding to further reduce the four-wave mixing (see Abstract, Column 6 Lines 28-54 and Claim 2).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5, 12-14, 19-21 and 28-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka et al.

7. Otsuka et al. does not specifically describe the core formed of SiO<sub>2</sub>. However, Otsuka et al. does describe the fiber (including the core) as formed from a silica-based material (see Column 1, Line 24). It is well-known in the art that SiO<sub>2</sub> is the most widely used material for optical fibers. Therefore, it would have been obvious to one of ordinary skill in the art that the silica-based material described by Otsuka et al. would most easily be embodied by using SiO<sub>2</sub> to construct the fiber, including the core.

8. Further, Otsuka et al. describes core dopants as P<sub>2</sub>O<sub>5</sub> and GeO<sub>2</sub> (see Column 6 Lines 29-35).

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents Nos. 5,894,537 to Berkey et al., 5,677,786 to Meli and 6,437,906 to Di Pasquale et al. describe devices for reducing four-wave mixing.

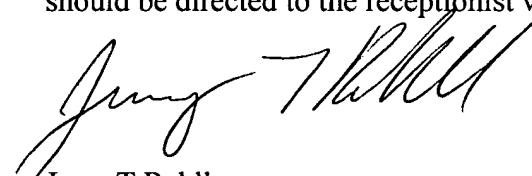
10. Prior art documents submitted by applicant in the Information Disclosure Statement filed on 01 August 2001 have all been considered and made of record (note the attached copy of form PTO-1449).

Art Unit: 2874

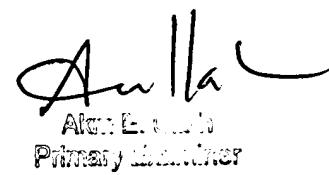
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry T Rahll whose telephone number is (703) 306-0031. The examiner can normally be reached on M-F (8:00-5:30), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Jerry T Rahll  
March 5, 2003



Alan E. Smith  
Primary Examiner